

Abstract of the Disclosure

A photomask for use in photolithography has substrate, a main pattern at one side of the substrate, and a transparency-adjusting layer at the other side of the substrate. The transparency-adjusting layer has a characteristic that allows it to change the intensity of the illumination incident on the main pattern during the exposure process accordingly. In manufacturing the photomask, a first exposure process is carried out on a wafer using just the substrate and main pattern. The critical dimensions of elements of the pattern formed on the wafer as a result of the first exposure process are measured. Differences between these critical dimensions and a reference critical dimension are then used in designing a layout of the transparency-adjusting layer in which the characteristic of the layer is varied to compensate for such differences.